SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Precept® 300 EC Selective Herbicide
Other names	none
Product code (UVP)	79032919
Chemical Group	Phenoxy Pyrazolone pyrazole
Recommended use	Herbicide
Chemical Formulation	Emulsifiable concentrate (EC)
Company	Bayer Cropscience Pty Ltd –ABN 87 000 226 022 391-393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone	(03) 9248 6888
Technical Information Service	1800 804 479
Facsimile	(03) 9248 6800
Website	www.bayercropscience.com.au
Emergency telephone no.	1800 033 111 Orica SH&E Shared Services

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

HAZARDOUS SUBSTANCE DANGEROUS GOODS

Hazardous classification	Hazardous (National Occupational Health and Safety Commission - NOHSC)
R-phrase(s)	R36 - Irritating to eyes. R38 - Irritating to skin. R43 - May cause sensitisation by skin contact. R65 - Harmful: may cause lung damage if swallowed. R63 - Possible risk of harm to the unborn child.
S-phrase(s)	See sections 4, 5, 6, 7, 8, 10, 12, 13.
ADG Classification	"Dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. - See Section 14.
SUSMP classification (Poison Schedule)	Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
MCPA: Pyrasulfotole: Mefenpyr-diethyl 250:50:12.5 g/l

Chemical Name	CAS-No.	Concentration [%]
MCPA 2-ethylhexyl ester	29450-45-1	37.14
Pyrasulfotole	365400-11-9	4.76
Mefenpyr-diethyl	135590-91-9	1.19
gamma-Butyrolactone	96-48-0	14.30

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	>= 1.00 - <= 5.00
Naphthalene	91-20-3	<= 1.00
Other ingredients (non-hazardous) to 100%		

SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

Inhalation

Move to fresh air. Keep patient warm and at rest. Oxygen or artificial respiration if needed. When symptoms persist or in all cases of doubt seek medical advice.

Skin contact

Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact

Remove contact lens and rinse eyes immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion

Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. Keep patient warm and at rest. Do not induce vomiting or give anything by mouth to an unconscious person. Obtain medical attention.

Notes to physician

Symptoms

Local:, Skin, eye and mucous membrane irritation, Systemic:, Headache, Vomiting, Lethargy, Muscle twitching, Liver and kidney injuries may occur., Hypotension, High blood pressure, If large amounts are ingested, the following symptoms may occur:, Stupor, Coma, Respiratory failure, Aspiration may cause pulmonary oedema and pneumonitis.

Treatment

Treat symptomatically.
Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.
Forced alkaline diuresis and hemodialysis may be considered.
In case of aspiration intubation and bronchial lavage should be considered.
There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Foam
Carbon dioxide (CO2)
Dry powder
Water spray

Hazards from combustion products

In the event of fire the following may be released:
Carbon monoxide (CO)
Hydrogen chloride (HCl)
Chlorine

Hydrogen fluoride
Nitrogen oxides (NOx)
Sulphur oxides
Hydrogen cyanide (hydrocyanic acid)

Precautions for fire-fighting

Wear self-contained breathing apparatus and protective suit.
Evacuate personnel to safe areas.
Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Whenever possible, contain fire-fighting water by diking area with sand or earth.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazchem Code •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with spilled product or contaminated surfaces.
Remove all sources of ignition.
Use personal protective equipment.
When dealing with a spillage do not eat, drink or smoke.
Keep unauthorized people away.

Environmental precautions

Contain contaminated water and fire fighting water.
Do not allow to get into surface water, drains and ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.
Clean contaminated floors and objects thoroughly, observing environmental regulations.

Reference to other sections

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

Handling

Hygiene measures

Avoid contact with skin, eyes and clothing.
Remove and wash contaminated gloves, including the inside, before re-use.
Wash hands immediately after work, if necessary take a shower.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers

Keep out of the reach of children.
Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep away from direct sunlight.

Flammability C1 Combustible Liquids Flash Point > 60 °C - <= 150 °C

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Naphthalene	91-20-3	10 ppm (TWA)		OES BCS
Naphthalene	91-20-3	52 mg/m3 / 10 ppm (TWA)	08 2005	AU OEL
Naphthalene	91-20-3	79 mg/m3 / 15 ppm (STEL)	08 2005	AU OEL

For further details on the Occupational Exposure Standards, see Section 16.

Biological limit values
none

Personal protective equipment - End user

General advice	Eye wash facility and safety shower should be available.
Respiratory protection	AS/NZS 1715/1716 approved respirator
Hand protection	Elbow-length PVC or nitrile gloves
Eye protection	Face-shield or goggles
Skin and body protection	Cotton overall buttoned to the neck and wrist Washable hat

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Liquid, clear
Colour	yellow to red-brown
Odour	aromatic

Safety data

pH	3.0 - 6.0 at 1 % (23 °C) Measuring at room temperature 23 °C ± 3 °C
Flash point	102 °C
Ignition temperature	450 °C The data refer to the solvent.
Upper explosion limit	7 %(V) The data refer to the solvent.
Lower explosion limit	0.6 %(V) The data refer to the solvent.
Vapour pressure	no data available

Relative vapour density	no data available
Density	ca. 1.05 g/cm³ at 20 °C
Water solubility	emulsifiable
Partition coefficient: n-octanol/water	no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Elevated temperatures Heat, flames and sparks.
Materials to avoid	Strong oxidizing agents Strong acids Strong bases
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Carbon monoxide Hydrogen chloride (HCl) Chlorine Hydrogen fluoride Nitrogen oxides (NOx) Sulphur oxides Hydrogen cyanide (hydrocyanic acid)
Hazardous reactions	Corrosive to steel and iron alloys.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Harmful if inhaled. High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects. Inhalation may cause central nervous system effects.
Skin	Irritating to skin. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
Eye	May cause irreversible eye damage.
Ingestion	Harmful if swallowed. Small amounts of the solvent in this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury. This product causes reversible cholinesterase inhibition without long term effects.
Acute oral toxicity	LD50 (rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (rat) > 5,465 mg/m3 Exposure time: 4 h
Acute dermal toxicity	LD50 (rat) > 2,000 mg/kg
Skin irritation	Slight irritation

Eye irritation	Moderate eye irritation.
Sensitisation	Sensitising
Chronic toxicity	MCPA-2-ethylhexyl ester did not cause specific target organ toxicity in experimental animal studies. Pyrasulfotole did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity
MCPA-2-ethylhexyl ester was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Pyrasulfotole was not genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
MCPA-2-ethylhexyl ester was not carcinogenic in lifetime feeding studies in rats and mice.
Pyrasulfotole caused at high dose levels an increased incidence of tumours in the following organ(s): cornea, urinary bladder. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.
This product contains ≥ 1% naphthalene. Naphthalene caused an increased incidence of tumours after chronic inhalation of high vapour concentrations in the following organ: Respiratory Tract. The tumours seen with naphthalene were caused through a non-genotoxic mechanism, which is not relevant at low doses.

Assessment toxicity to reproduction
MCPA-2-ethylhexyl ester did not cause reproductive toxicity in a two-generation study in rats.
Pyrasulfotole did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity
MCPA-2-ethylhexyl ester caused developmental toxicity only at dose levels toxic to the dams. MCPA-2-ethylhexyl ester caused a delayed foetal growth.
Pyrasulfotole did not cause developmental toxicity in rats and rabbits.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 3.2 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.
Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 100 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient pyrasulfotole.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) 0.28 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.

Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) > 100 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient pyrasulfotole.
Toxicity to aquatic plants	EC50 (Navicula pelliculosa) 1.2 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.
Toxicity to aquatic plants	EC50 (Pseudokirchneriella subcapitata) 29.8 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient pyrasulfotole.
Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) 2,250 mg/kg The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.
Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) > 2,000 mg/kg The value mentioned relates to the active ingredient pyrasulfotole.
Biodegradability	Readily biodegradable. aerobic The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester.
Biodegradability	Not readily biodegradable. The value mentioned relates to the active ingredient pyrasulfotole.
Stability in soil	in Field trial: DT50 4 - 31 d. aerobic The value mentioned relates to the active ingredient pyrasulfotole.
Bioaccumulation	The value mentioned relates to the active ingredient MCPA 2-ethylhexyl ester. low
Additional Environmental Information	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:
Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	**3082**
Class	9
Subsidiary Risk	None

Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA-2-ETHYLHEXYL ESTER SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

IMDG

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
EmS	F-A , S-F
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA-2-ETHYLHEXYL ESTER SOLUTION)

IATA

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA-2-ETHYLHEXYL ESTER SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 62652

See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Precept® is a registered trademark of the Bayer Group.

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

Further details on the Occupational Exposure Standards mentioned in Section 8:

CEILING: Ceiling Limit Value

OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.

STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.

SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.

TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

END OF SDS